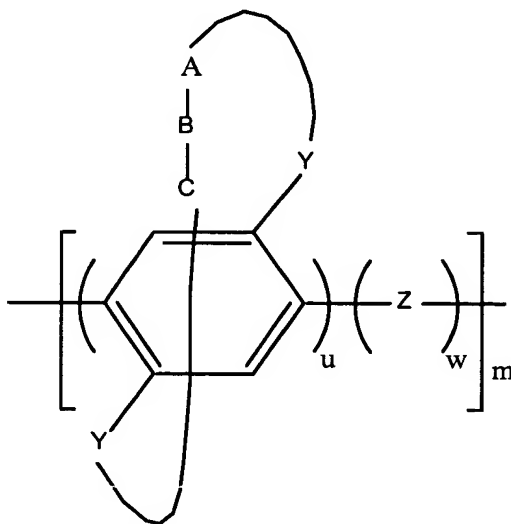


**What is claimed is:**

1. A light emitting polymeric material said light emitting polymeric material capable of producing electroluminescence upon being provided with a flow of electrons, said light emitting polymeric material comprising:

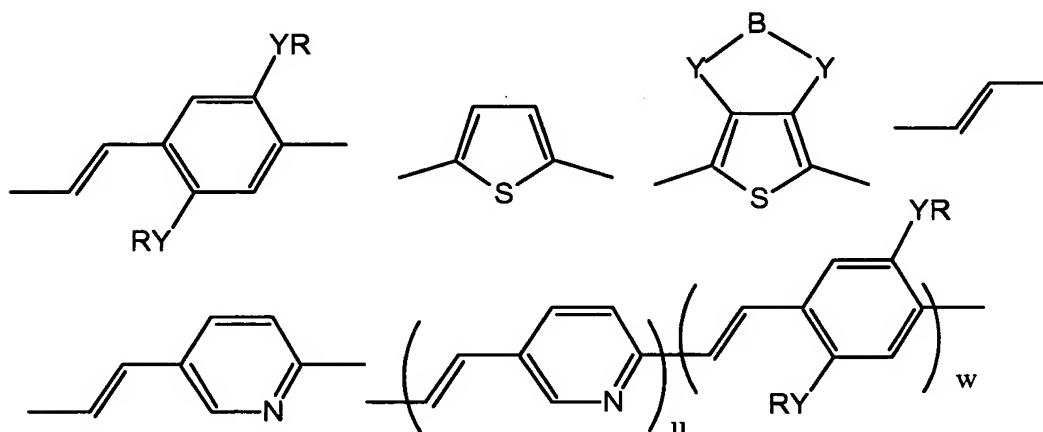
a plurality of polymeric chains comprising polymeric chains each having substituent moieties of sufficient number and size and extending from said polymeric chain and about a substantial portion of the circumference about said polymer chain so as to maintain said polymeric chains in a sufficiently deaggregated state, so as to substantially prevent the redshifting of said electroluminescence and the lowering of light emission efficiency of said electroluminescence.

2. A light emitting polymeric material according to claim 1 comprising polymeric chains selected from the group consisting of alternating and random copolymers, having the structure:



wherein m is the degree of polymerization; Y is selected from the group consisting of -CH<sub>2</sub>, O, S, CO and NR<sub>2</sub> wherein R is an alkyl group containing 1 to 16 carbon

atoms; wherein A and C are independently selected from the group consisting of  $(CH_2)_n$ ,  $(CH_2CH_2O)_n$ ,  $(CH_2CH_2O)_nNR$ ; wherein R is an alkyl group containing 1 to 16 carbon atoms, and aryl groups having 6 to 14 carbon atoms; B is selected from the group consisting of  $(CH_2)_n$ , aryl groups having 6 to 14 carbon atoms, and calixarenes having 18 to 200 carbon atoms; wherein u may be of a value independently selected from the group 1 to 6, inclusive; wherein w may be of a value independently selected from the group 1 to 6, inclusive; wherein n may be of a value independently selected from the group 0 to 6, inclusive; and wherein Z may be a structure selected from the group consisting of :



wherein R is an alkyl group containing 1 to 16 carbon atoms; wherein Y is selected from the group consisting of -  $CH_2$ , O, S, CO and  $NR_2$  wherein R is an alkyl group containing 1 to 16 carbon atoms; B is selected from the group consisting of  $(CH_2)_n$ , aryl groups having 6 to 14 carbon atoms, and calixarene having 18 to 200 carbon atoms; wherein u may be of a value independently selected from the group 1 to 6, inclusive; and wherein w may be of a value independently selected from the group 1 to 6, inclusive.

3. A light emitting polymeric material according to claim 1 wherein said polymeric material is further provided with a layer of an electron blocking polymer.
4. A light emitting polymeric material according to claim 3 wherein said electron blocking polymer is selected from the group consisting of poly(vinylcarbazole).
5. A light emitting device, said device comprising a light emitting polymeric material according to claim 1, and a source of electrical current so as to supply said electron transporting polymer with a flow of electrons.
6. A light emitting device, said device comprising a light emitting polymeric material according to claim 1, and a source of electrical current so as to supply said electron transporting polymer with a flow of electrons, said device selected from the group consisting of single layer, bilayer and multi-layer light emitting devices.
7. A light emitting polymeric material said light emitting polymeric material capable of producing electroluminescence upon being provided with a flow of electrons, said light emitting polymeric material comprising:
  - a plurality of polymeric chains comprising polymeric chains each being provided with rotaxenes of sufficient number and size and extending from said polymeric chain and about a substantial portion of the circumference about said polymer chain so as to maintain said polymeric chains in a sufficiently deaggregated state, so as to substantially prevent the redshifting of said electroluminescence and the lowering of light emission efficiency of said electroluminescence.

8. A light emitting polymeric material according to claim 7 wherein said polymeric material is further provided with a layer of an electron blocking polymer.
9. A light emitting polymeric material according to claim 8 wherein said electron blocking polymer is selected from the group consisting of poly(vinylcarbazole).
10. A light emitting device, said device comprising a light emitting polymeric material according to claim 7, and a source of electrical current so as to supply said electron transporting polymer with a flow of electrons.